

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re the Application of:

Jarkko Viinikanoja

Serial No.: 09/987,849

Filed: November 16, 2001

For: Mobile Terminal Device Having  
Camera System

Atty. Docket No.: 006916.00010

Group Art Unit: 2622

Examiner: Lin Ye

Confirmation No.: 7575

**REPLY BRIEF**

**Box Appeal Briefs - Patents**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. § 41.41(a)(1), Appellant submits this Reply Brief to the Board of Patent Appeals and Interferences in response to the Examiner's Answer mailed on January 25, 2008. If any fees are required or if an overpayment is made, the Commissioner is authorized to debit or credit our Deposit Account No. 19-0733, accordingly.

**Status of the Claims**

Claims 1-105, 111, 118 and 128 were previously cancelled. Claims 106-110, 112-117, 119-127 and 129-143 remain in the application. All pending claims (106-110, 112-117, 119-127 and 129-143) stand rejected. Applicant is appealing all pending claims (106-110, 112-117, 119-127 and 129-143). All claims are shown in the attached appendix.

**Grounds of Rejection to be Reviewed on Appeal**

The following grounds of rejection are to be reviewed on appeal:

- The pending 35 U.S.C. §102 rejection regarding claims 106, 108-10, 112-113, 116-117, 119, 125-127, 129, 130-131 and 133-147 fails to address all the claims limitations;
- The pending 35 U.S.C. §102 rejection regarding claims 120-124 and 143 fails to address all the claim limitations;
- The pending 35 U.S.C. §103 rejection regarding claims 107, 114-115, and 132 fails to address all the claim limitations and does not teach, suggest or disclose the subject matter of claims 107, 114-115, and 132; and
- The pending 35 U.S.C. §103 rejection regarding claims 138-142 fails to address all the claim limitations and does not teach, suggest or disclose the subject matter of claims 138-142.

## Argument

### Summary

Applicants would like to thank the Examiner for the review and consideration of Applicant's arguments against the written description rejection, and the subsequent removal of the rejection. Applicants, however, would like to address 1) the Examiner's interpretation of the term "unitary" set forth in the Examiner Answer, and 2) the Examiner's interpretation of the lens Module of Yoshida as set forth in the Office Action of December 1, 2006 and the Examiner's Answer.

#### 1. Definition of "Unitary"

Applicants respectfully disagree with the Examiner's interpretation of the term "unitary" set forth in the Examiner's Answer. Specifically, Applicants believe that the interpretation is in stark disagreement with the meaning as set forth in the prosecution history and the Examiner's own statements. As recited in claim 106, for example, the relevant element provides:

a unitary housing of the mobile terminal device comprising at least one telecommunications component and a camera system comprising a lens module which enables taking pictures with optical imaging properties given by the lens module.

Applicants provided proposed claims including the term "unitary housing" during prosecution of the present application. In fact, upon reviewing the claims, the Examiner wrote the following:

The proposed claim indicates the camera system is within the **same "unitary"** housing [sic] along with at least on [sic] telecommunications component. This is different than the camera system disclosed in the Umezawa reference. **The Examiner agrees.**

(Interview Summary dated October 17, 2006, page 3, lines 2-4, emphasis added). The proposed amendment also had support in the Specification, which indicates that "[t]he camera system is built **in** the mobile terminal device. The mobile device and the camera system comprising the lens module are **enclosed by the same housing.**" (Sub. Spec., p. 11, para. 35, emphasis added).

Subsequently, the term "unitary" was amended to the claims in the Amendment dated October 30, 2006, which stated:

The term “unitary” as recited in the amended claims **is to more clearly recite that the same housing comprises both elements** (a camera system and at least one telecommunications component), however, one skilled in the art will readily appreciate that the housing may have multiple chambers or openings, of which portions of the camera system and/or the at least one telecommunications component may extend or protrude from (such as an antenna). Moreover, one skilled in the art will realize that one or more compartments or pieces may be joined to form the unitary housing.

(Amendment and Response dated October 30, 2006, p. 11, ll. 12 - 18, Emphasis added).

In view of the foregoing, applicants respectfully disagree with the definition of “unitary” as set forth in the Examiner’s Answer. In redefining the term “unitary,” the Examiner Answer states:

In this case, the term "unitary" is reasonably construed by the examiner to **mean creating a whole**. Therefore, when the communication module 10 and the digital camera 40 of Wang are coupled together, the resulting unit is made whole, thus creating a unitary (whole) housing. **Appellant seems to assert that the term "unitary housing" implies a single, one-piece housing, however, a single, one-piece housing is not what is claimed and at issue.**

(Examiner’s Answer dated January 25, 2008, ll. 10 – 15, p. 15)

Applicants respectfully submit that the language “the same housing: is at issue. In fact, the term “same” was expressly used by the Applicant and the Examiner when discussing the proposed claim amendments and entering the amendments on the record. Nowhere within any of the references asserted by the Examiner teach a “same housing” that comprises the camera system and at least one telecommunications component as recited by the pending claims and expressly stated in Interview Summary and the Applicant’s Response of October 30, 2006. While Applicant’s statements indicated that one skilled in the art will readily appreciate that “**the housing** may have multiple chambers or openings, of which **portions** of the camera system and/or the at least one telecommunications component **may extend or protrude from** (such as an antenna),” this still would require a single housing to include the two components. Further, while the camera may be in one compartment within the housing while the telecommunications component is another component in the housing, they are still required under the scope of the claim to be within the same “unitary housing.”

The references currently asserted against the claims teach two separate and distinct housing structures that may be joined together to make a unit having two separate housings **connected by contacts** on the outer perimeter of their respective housings. Specifically, Figure 6 of Wang appears to be the only figure relating to capturing images of that reference. “FIG. 6, [reproduced below,] shows an example in which the communication module 10 is coupled with a digital camera 40 through the first connection port 16.” (Wang, paragraph 23, lines 4-7) The Figure readily shows the vast difference between the “unitary” housing claimed and described in the prosecution history than that described in the prior art. Specifically, there are two separate housings, each with contacts for connecting to other devices.

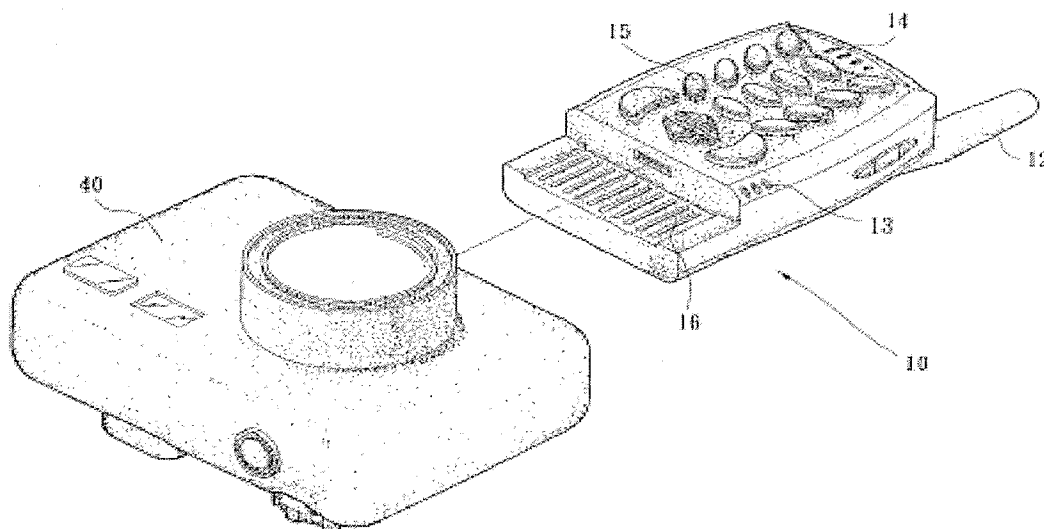
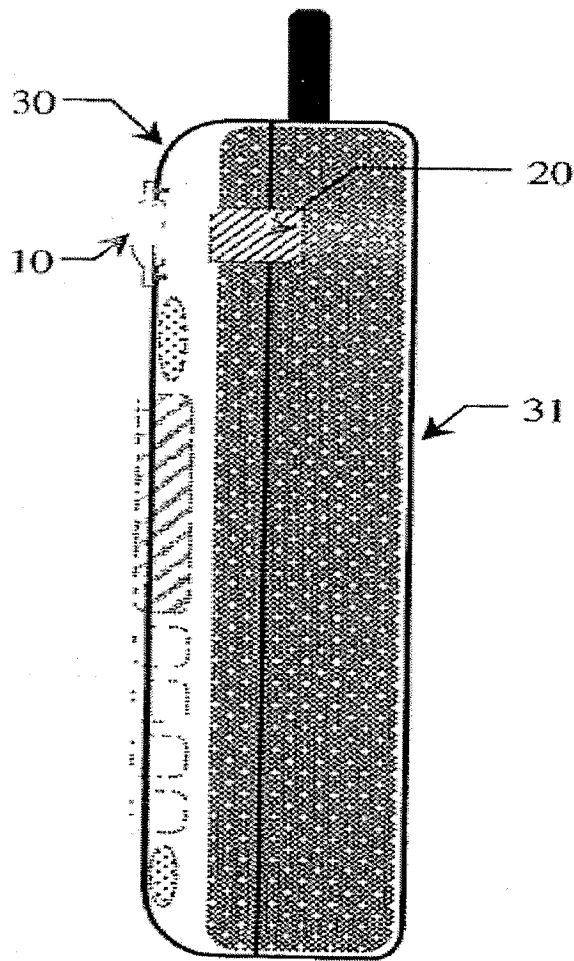


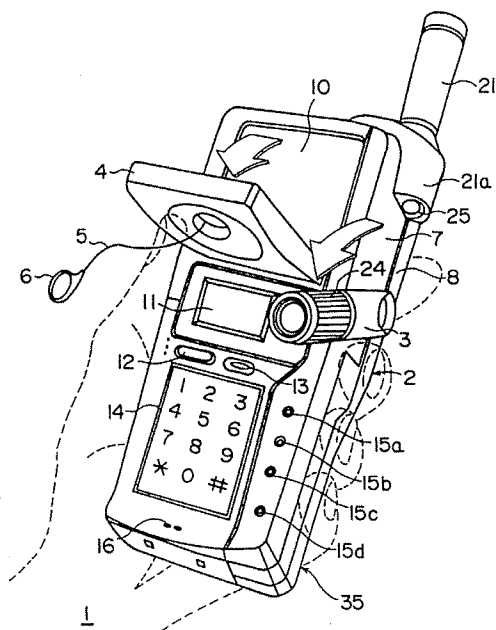
FIG. 6



This is in stark contrast with what is claimed in the claim currently under appeal, which require a “unitary housing” Figure 2c, reproduced to the left for reference, “shows a side view of a mobile phone integrating a camera module according to FIG. 2b” and can be considered one claimed embodiment having a “unitary housing.” “The housing of the mobile phone may consist of two parts, a front cover 30 and a back cover 31. The camera unit 20 is integrated in the mobile phone such that the front cover presents an optical pass through. (Paragraph 138, lines 2-4, emphasis added)

Applicants respectfully disagree with the Examiner’s assertion that the act of merely connecting two separate components, each having their own housing, together creating a “resulting unit [that] is made whole” and therefore, would meet our claimed element of a “unitary housing.” Specifically, his definition goes against the term “unitary housing” as known as explicitly set forth during prosecution. In fact, Wang is directed to an “invention [that] adapts a **modular design** to divide the mobile communications device in a **separated** communication module and a display module.” (Wang, Abstract, ll. 4 – 7, emphasis added).

In fact, under this interpretation, the Examiner would not have removed the rejection under Umezawa in view of the amendment reciting “unitary.” As discussed above, the Umezawa was previously cited against the claims. Specifically, an embodiment shown in Figure 7 of Umezawa (reproduced below) shows a camera connected to a phone housing, similar to that provided in the Wang reference. Upon amending the claims to recite “unitary,” the rejection was dropped and the Examiner stated:



“The proposed claim indicates the camera system is within the same “unitary” housing [sic] along with at least on [sic] telecommunications component. This is different than the camera system disclosed in the Umezawa reference. The Examiner agrees.” (Interview Summary, page 3, lines 2-4) As seen, Wang and Umezawa both have an external camera that may be attached to the separate housing of a mobile device. In neither instance, is there a telecommunications component in the same unitary housing as the camera system.

## 2. The lens Module of Yoshida

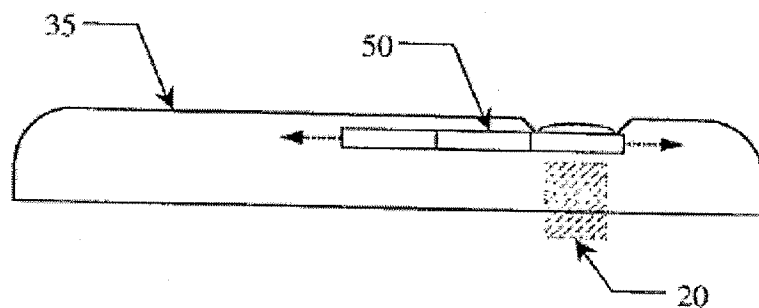
Applicants respectfully submit that the Examiner’s interpretation of Yoshida neglects to separate the lens module of Yoshida as the lens module of the asserted “means for changing the optical property of the lens.” The Examiner first asserts that the lens (108) of Yoshida is equivalent to the lens module of the recited claims. (See, *e.g.*, Office Action dated December 1, 2006, page 4, paragraph 6; stating: “the Yoshida reference discloses...a camera system...comprising a lens module (108) which enables taking pictures with optical imaging properties given by the lens module.”

The Examiner, however, then asserts that the same lens also serves as the means for changing the optical properties of the lens (108). Specifically, the Examiner asserts: “Yoshida discloses...a means for changing optical properties of the lens module (e.g., the lens module is a zoom lens of the three time-magnification, see Col. 7, lines 26-34).” Applicants respectfully submit that lens (108) cannot be the lens module of the camera system that provides optical imaging properties and also a means for changing the optical properties of the same lens. First,



as recited, for example, in claim 106, the means is **adapted to cooperate** with the lens module of the camera system to enable taking pictures with changed optical imaging properties, wherein a part of the **unitary housing comprises the means for changing optical properties**. Thus, the lens module as claimed is separate from the means that “is adopted to cooperate with the lens module.” Furthermore, the unitary housing, not the lens module comprises the recited means.

This is in contrast to what the Applicants have recited in the rejected claims. One such embodiment incorporating the limitation is shown in Figs. 4a and 4b of the present application. As one example, Fig 4a shows a side view of a mobile phone cover “with [an] integrated sliding arrangement of several lenses with respect to a further embodiment of the invention.” The



housing shown in FIG. 4a and FIG. 4b may be “a part of the cover of a mobile phone, e.g. the back cover or the front cover.” (Paragraph 144, lines 4-5; see also paragraphs 146-151 for further embodiments having other structures serving as the means.)


Based on the foregoing, the Applicant respectfully requests reversal of all grounds for rejection.

**CONCLUSION**

The rejections contained in the Action of December 1, 2006 should be reversed for at least the reasons recited above. Reversal of the rejections is respectfully requested.

Respectfully submitted,  
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Date: March 18, 2008

  
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**CLAIMS APPENDIX**

Claims 1. – 105. (Cancelled)

106. A mobile terminal device comprising:

a unitary housing of the mobile terminal device comprising at least one telecommunications component and a camera system comprising a lens module which enables taking pictures with optical imaging properties given by the lens module; and

a means for changing optical properties of the lens module, the means being adapted to cooperate with the lens module of the camera system to enable taking pictures with changed optical imaging properties, wherein a part of the unitary housing comprises the means for changing optical properties.

107. A mobile terminal device according to claim 106, wherein the part of the unitary housing comprising the means for changing optical properties is detachably connected to the camera system.

108. A mobile terminal device according to claim 106, wherein the part of the unitary housing integrates an assembly of a plurality of means for changing optical properties each being adapted to cooperate with the lens module of the camera system, wherein the assembly can be changed upon actuation.

109. A mobile terminal device according to claim 106, wherein the means for changing optical properties is at least one of a lens, an objective comprising lenses, at least one filter, and a diffractive optical element.

110. A mobile terminal device according to claim 106, wherein the entire camera system is built-in the mobile terminal device.

111. (Cancelled)

112. A mobile terminal according to claim 106, wherein the mobile terminal device is a mobile phone.

113. A part of a unitary housing of a mobile terminal device comprising at least one telecommunications component and a camera system, wherein the part of the housing comprises means for changing optical properties of a lens module of a camera system of the mobile terminal device, wherein the camera module with the lens module enables taking pictures with optical properties given by the lens module and the means are adapted to cooperate with the lens module of the camera system to enable taking pictures with changed optical imaging properties.

114. A part of the unitary housing according to claim 113, wherein the means for changing optical properties is detachably connected.

115. A part of the unitary housing according to claim 113, wherein the part of a housing is detachably connected to a lens module or a camera system.

116. A part of the unitary housing according to claim 113, wherein the part of a housing integrates an assembly of a plurality of means for changing optical properties, wherein the assembly of lenses can be changed upon actuation.

117. A part of the unitary housing according to claim 113, wherein the means for changing optical properties is at least one of a lens, an objective comprising lenses, at least one filter, and a diffractive optical element.

118. (Cancelled)

119. A part of the unitary housing according to claim 113, wherein the mobile terminal device is a mobile phone.

120. An apparatus for changing optical properties of a lens module of a camera system of a mobile terminal device, wherein the camera system comprising the lens module enables taking pictures with optical imaging properties given by the lens module, the apparatus being comprised by a part of a unitary housing of the mobile terminal device comprising at least one telecommunications component and the camera system, and the apparatus being adapted to cooperate with the lens module of the camera system to enable taking pictures with changed optical imaging properties.

121. An apparatus for changing optical properties according to claim 120, wherein the part of the unitary housing is detachably connected with the camera system.

122. An apparatus for changing optical properties according to claim 120, wherein the apparatus for changing optical properties comprises at least one means selected from the group consisting of: a lens, an objective comprising lenses, at least one filter, a diffractive optical element, and combinations thereof.

123. An apparatus for changing optical properties according to claim 120, wherein the unitary housing is a housing of an external camera system attached to the mobile terminal device as an external module.

124. An apparatus for changing optical properties according to claim 120, wherein the mobile terminal device is a mobile phone.

125. A method comprising:

changing optical properties of a lens module of a camera system of a mobile terminal device by actuating a means for changing the optical properties of the lens module to cooperate with the lens module to enable taking pictures with changed optical imaging properties, wherein the means for changing the optical properties are located in a unitary housing that also includes at least one telecommunications component of the mobile terminal device.

126. A method for changing optical properties according to claim 125, wherein the apparatus for changing optical properties comprises at least one means selected from the group consisting

of: a lens, an objective comprising lenses, at least one filter, a diffractive optical element, and combinations thereof.

127. A method for changing optical properties according to claim 125, wherein the camera system is built in the mobile terminal device.

128. (Cancelled)

129. A method for changing optical properties according to claim 125, wherein the mobile terminal device is a mobile phone.

130. A system comprising:

a mobile terminal device having a unitary housing comprising a camera system having a lens module, which enables taking pictures with optical imaging properties given by the lens module and at least one telecommunications component; and

a means for changing optical properties adapted to cooperate with the lens module to enable taking pictures with changed optical imaging properties, the means for changing optical properties being arranged with the lens module.

131. A system according to claim 130, wherein the mobile terminal device is a mobile terminal device according to claim 106.

132. A system according to claim 130, wherein the mobile terminal device is a mobile terminal device according to claim 107.

133. A system according to claim 130, wherein the mobile terminal device is a mobile terminal device according to claim 108.

134. A system according to claim 130, wherein the mobile terminal device is a mobile terminal device according to claim 109.

135. A system according to claim 130, wherein the mobile terminal device is a mobile terminal device according to claim 110.

136. A system according to claim 130, wherein the mobile terminal device is a mobile terminal device according to claim 111.

137. A system according to claim 130, wherein the mobile terminal device is a mobile terminal device according to claim 112.

138. A system according to claim 130, wherein the means for changing optical properties is means for changing optical properties according to claim 120.

139. A system according to claim 130, wherein the means for changing optical properties is means for changing optical properties according to claim 121.



140. A system according to claim 130, wherein the means for changing optical properties is means for changing optical properties according to claim 122.

141. A system according to claim 130, wherein the means for changing optical properties is means for changing optical properties according to claim 123.

142. A system according to claim 130, wherein the means for changing optical properties is means for changing optical properties according to claim 124.

143. A mobile terminal device comprising:

a camera system;

a part of a unitary housing of the mobile terminal device comprising the camera system and at least one telecommunications component, wherein the part of the housing is detachable from the mobile terminal device and comprises at least part of a lens module adopted to cooperate with said camera system.